

drain. This "break-off" land, as we call it here, is in some instances quite as dry as the high land, but in other instances, through being blocked up by moss and down timber in the woods, the water spreads over quite a large surface. The most of this land will be sufficiently dry when cleared, but there is no mistake in saying that this land that will need drainage will eventually be the very best farming land to be found in the district.

6. In some parts of this district, where the large timber has been taken off, notably in the vicinity of New Liskeard and other places, I believe the land can be cleared and stumped for about \$20 an acre, because this part, where the timber was culled, was burnt over since 1901, and the larger stumps and remaining trees will be easily disposed of. But north and west from New Liskeard you will find large tracts of excellent timber lands, a goodly share not yet culled. Those farms will produce from 20,000 to 40,000 feet of lumber to the acre; I mean the timber of all kinds, cut down to eight inches, which will be found per acre. This will sell at the sawmill, if you have considerable pine or birch, or ash or elm, on an average of \$10 per thousand feet. At this figure, you will get on an average of \$300 of lumber per acre. You will find acres that won't average those figures, but, at the same time, you will find acres that will exceed this estimate, if the timber is taken off according to these figures. The other part of the clearing can be cleared for \$10 an acre, but circumstances alter cases. If you cannot get sawmills handy enough to draw this timber with profit, it will cost in labor \$30 an acre to chop and clear this land ready for first crop; and again, we have in some parts of this district prairie lands that can be got ready for the plow for \$5.00 an acre.

7. I believe an experiment farm in Temiskaming would be a valuable advantage to the farmers here for the following reasons: This district promises to be an excellent dairy country. The butter now made here by the farmer's wife is of a most superior flavor, with solid texture, even in very warm weather, and is of a golden June color. This, in general, is manufactured in the good old-fashioned way which was generally adopted as in "ye olden time." A dairy school in connection with an experiment farm would be of immense benefit and profit. This farm and dairy school would be able to demonstrate to the world the capabilities of Temiskaming. The experiment farm would be able to inform the farmers here which are the best varieties of grain to sow, which are the best varieties of potatoes to plant, which are the best varieties of fruit trees to plant, and also the best plan to adopt for the cultivation of the same. Sugar beets grow large here. An experiment farm would be useful along these lines, to see if the sugar beet does not contain a large amount of sugar.

Temiskaming Soil and Crops.

Editor "The Farmer's Advocate":

In regard to the passing visitors referred to in your welcome letter, I must say that the appearance of both the soil and timber near New Liskeard is no criterion of our district, because the large timber was culled several years ago, and the clay there is somewhat light in color. But by actual experience, this white clay is different from the white clay occurring through some sections in Old Ontario. On my father's farm, in the County of Middlesex, where I was raised, one of my chief jobs when we were seeding was to wield a heavy mallet or maul and pulverize those white clay lumps with great force. My father kept those small portions of his farm up to a high state of fertility by manuring them heavily; but this white clay occurring in the vicinity of New Liskeard is altogether different, in that it will pulverize itself, and, in actual experience, grows crops of all kinds. Some of this same white clay, one mile and a half north of New Liskeard, on Mr. Bowman's farm, grew the wheat that took the gold medal at the Exposition in Paris, France, and also at Glasgow, Scotland. New Liskeard is situated in the Township of Dymond, but is incorporated into a town now. As you proceed north through the township, the visitor will perceive the clay getting a richer color, and continuing richer-appearing through the Township of Harley, the next township north being Hilliard. This is my favorite township, being my home. I am sending you by to-day's mail a sample of clay loam from the higher land of my farm. The soil from the lower, or "break-off" land is darker and finer. I am also sending you sample stalks of clover and timothy, and also a smaller stalk of timothy from seed sown on the 10th October, 1905. The object of sending you these plants is to show the strength of our soil, notwithstanding its appearance. The timothy stools good and strong, unsurpassed, if equalled, by the richest land in Old Ontario. I am also sending you a sample of Siberian oats, grown in Hilliard, on the farm of Mr. Frank Coutts. I invite a friendly competition by the farmers of Old Ontario to duplicate this sample of oats.

Temiskaming. NEIL A. EDWARDS.
(Note—The samples of grain, timothy and

clover received from Mr. Edwards in good condition, bear out the observations made in his letter. The samples of clover and timothy are respectively 18 and 20 inches in length, and the stalks of timothy sown last October had already attained a growth of over 7½ inches. The oats are clean and plump, and a credit to the soil and methods of culture in vogue in Northern Ontario.—Editor.)

Plowing Alfalfa Sod.

Alfalfa is difficult to break. The roots are very large and tough, and resist a plow to the utmost. It is much harder to plow than clover sod. The plow for alfalfa should be a walking plow, strongly made, and of good pattern. It should be provided with two steel shares, one of which should be sent to the smith to be sharpened while the other is in use. The plowman should also be provided with flat files, and at intervals of about twenty minutes he should turn the plow out of the ground and file the edge of the share sharp. There need be no time lost while he is doing this, as the team will need the rest, and it takes but a few minutes to bring the share to an edge if given this frequent attention.

Besides this, there should be affixed to the land-side of the plow a wing running flat in the bottom of the furrow, and extending out three inches into the uncut soil. This wing cuts off the roots of the edge of the next furrow to be turned, so that the plow will only have to contend with those farthest away from the edge of the furrow and firmly fixed in the soil. It aids immensely to use this wing in ease of plowing and steadiness with which the plow runs. It should not run squarely back from the bottom of the land-side, but diagonally, so that roots will not catch on it and make it throw the plow out or draw badly. With the best of plowing, one will hardly cut all the roots, and if the season should be a moist one, there will be a good deal of growth from roots that are cut off and turned under. This need not alarm the novice, for these plants will not make a vigorous growth in the succeeding crop, and do no apparent harm.

The best crop to follow alfalfa is corn, beets or potatoes. Small grain is apt to lodge, though in a desert soil, as in Utah, where the writer once lived, grain had refused to grow at all until planted on alfalfa sod, when it yielded as high as 60 bushels per acre, with irrigation. Likewise, in Colorado, it was thought that potatoes could not be profitably grown until some one tried them on alfalfa sod, when they became a staple and very profitable crop, whole train loads being sent from about Greeley to all parts of the land.

Corn on alfalfa sod will make a greater growth and larger yield than ever before seen on that soil, even in its virgin state.

As the roots are large and tough, and decay slowly, there will be a considerable remnant of the influence of the decaying alfalfa sod the second year, and it is the practice of the writer to sometimes take off two crops of corn in succession, manuring the ground for the second crop, and at once sow back to alfalfa with a nurse crop of spring barley. This is good practice, for the reason that in the second year's manuring the weaker parts of the field may receive a double allowance of manure, and thus the fertility of the whole be brought to a state of evenness.

It is notable that the second seeding of alfalfa on a field is more successful than the first, owing, no doubt, to the greater fertility of the soil, the ready inoculation with right bacteria, and the better drainage, owing to the decayed alfalfa roots which have thus made way for their successors. The third seeding has proven even better than the second on Woodland Farm.

It is foreseen that in a great wheat-producing region like Pennsylvania, where farm practices are so well established and wheat-growing has become a habit, that many farmers who become interested in alfalfa will desire to sow it with a wheat crop. The writer can give scant encouragement to this practice. Indeed, he has never seen an instance of success with alfalfa sown on winter wheat in the spring. The soil is not in condition for alfalfa seed, and the crop seems to exhaust the soil of moisture to such a degree that the alfalfa dies in part, leaving a thin stand. This point has already been enlarged upon, but it is of such vital importance in a scheme of rotation in which alfalfa enters, that it is repeated.—[Pennsylvania Bulletin, No. 129.]

The Rat Nuisance.

In reply to a question, The Country Gentleman recommends copperas to drive away rats. Pulverize and throw plentifully about where the rats go; also about their holes. It is supposed to make their feet sore. Freshly-slaked lime has the same effect. Somebody may find this suggestion worth trying, though, for our part, we have great faith in cement floors and cats.

THE DAIRY.

Keep Up the Milk Flow.

From now on pastures will be getting short and brown in many localities, unless we are favored with an exceptional season. A great deal of cow energy will be wasted in roaming over short commons and fighting flies in the blazing sun. Some dairymen make a practice of stabling their cows during the midsummer days, letting them out into the pasture at night. Many, however, object to the work entailed, and, for the majority, it is perhaps a doubtful economy. There are few herds, though, which would not pay better profits if a little extra feed were furnished. Nothing we have ever tried equals lucerne for this purpose. It may be cut daily and carted to the stable or thrown over into a field or paddock, and our experience is that it is eaten with scarcely any waste. The immediate results in the milk pail are encouraging, and it cannot be too strongly emphasized that a sustained milk flow goes far to prolong the milking period, and the profits from the cows are in this way greatly increased. If one has no lucerne, a little new clover hay will be relished, and will help out the pasture, while maintaining the milk flow fairly satisfactorily. Another good supplementary feed is green wheat or oats, and when pastures are short it pays better to cut a portion of the grain green than to let it all ripen and thresh it. Particularly if there is a spot that is lodged, does it pay to make milk out of it. Lodged grain not only fails to fill satisfactorily, but frequently smothers the young clover. Mowing the crop for green feed gives the clover a chance, and prevents a patch of weeds in next year's meadow. Too many dairymen begrudge their cows a little extra feed. They feel as though so much grain or hay were disappearing down the cow's muzzle, and nothing would ever come of it. A traditional conviction asserts that pasture is the only feed a cow ought to get in summer, and if the season is dry and fodder famine is threatened, they are more parsimonious than ever. They are not aware that pasture yields the least nutriment per acre of any crop. An acre allowed to grow a crop of hay will afford sustenance for a cow nearly three times as long as an acre pastured in the ordinary way. The only offsets in favor of pasture are the saving of labor and the health of the cows under this system. But when pastures are short or fodder famine is threatened, it pays handsomely to cut mature or nearly mature crops, so as to spare the pasture, and enable it to retain its vigor, so that when the rains do come it may furnish good grazing to bring the stock to the stables in thrifty condition in autumn. Feed the cows something when pastures begin to fail. Don't let the milk flow drop off. It's a losing game any way you look at it.

Canadian Record of Performance.

INSTRUCTIONS FOR OWNERS OF PURE-BRED DAIRY CATTLE.

1. Blank forms for recording weights of milk are mailed on application to Live-stock Branch, Department of Agriculture, Ottawa.

2. One of these forms should be posted in the stable in a convenient and well-lighted place, with pencil attached; the spring scale should be suspended close by.

3. Weigh the milk from each cow at each milking. Give fair weight, and enter the weight in the proper space; be sure to deduct weight of the pail.

TAKING COMPOSITE TEST SAMPLES.

One preservative tablet must be placed in each bottle before the first sample of milk is poured in.

On three days, about the middle of each month, after weighing the milk, pour it from one pail to another twice, and while the milk is still in motion take one dip of milk with the small dipper provided for the purpose, and pour it into the test bottle bearing the name and number of the cow.

The six dips of milk from the milking of each cow for the three days should exactly fill the bottle. Screw the top of the bottle on tightly.

Be sure that the cow's name and number appear on the bottle, inclose in box, and express to tester, as directed.

Caution.—Keep the box containing the test samples locked in a safe place from children or other inquisitive persons, as the preservative used is a DEADLY POISON.

The box should be kept in a cool place, and should not be disturbed, except when fresh samples are taken.

Mix the milk in the test bottles each time a fresh sample is added, by giving the bottle a rotary motion.

The following equipment is necessary, and may be procured from any dealer in creamery supplies:

- A circular spring scale.
- A sample bottle for each cow.
- A small dipper.
- A box for holding and expressing samples.
- One package of 500 preservative tablets.